Science

Scientific
research and education fuel the growth of our economy, promote our national security, and inspire our children. Many of the technological benefits we reap today stem from wise investments we made decades ago in scientific research and education. I strongly believe we must continue to support such investments in order to provide for the future prosperity of our nation.

As a member
of the House Science Committee, and as Chairman of the Subcommittee on Research and Science Education, I have fought to strengthen math and science education, safeguard our cyber-infrastructure, and invest in new technologies. As a fiscal conservative, I don't believe in simply spending more money to solve a problem. To this end, I've sought to more intelligently direct federal investments in science and technology. I will continue to serve as a strong advocate for investments in scientific research and education, but I will continue to insist that dollars are invested wisely and productively.

Science and Technology Education

Our students must be provided with well-trained math and science teachers and state-of-the-art curriculums to keep pace with today's job markets. As a member of the House Science Committee, Congressman Baird believes we must improve the performance of our young people in science, technology, and mathematical fields. That's why Congressman Baird is a cosponsor of the 10,000 Teachers, 10 Million Minds Science and Math Scholarship Act. This legislation establishes a scholarship program at the National Science Foundation (NSF) to provide scholarships to science, math, and engineering students who commit to become science or math teachers at elementary and secondary schools; authorizes summer teacher training institutes at the National Science Foundation (NSF) and the Department of Energy to improve the content knowledge and pedagogical skills of in-service science and math teachers; establishes a master's degree program at NSF for in-service science and mathematics teachers; and establishes training programs at NSF for preparing science and math teachers to teach Advanced Placement and International Baccalaureate courses in science and math.

Small Business Innovation Research

Our economy depends on innovation for continued growth, and research indicates that small businesses tend to be more dynamic and inventive than large corporations. The federal government's Small Business Innovative Research (SBIR) program was designed to encourage small

businesses to meet these goals and develop innovative technologies.

In 2001, however, the Small Business Administration (SBA) ruled that companies receiving more than 51 percent of their financial backing from venture capitalists were excluded from the SBIR program. After talking with a venture capital-backed small business innovator in his congressional district that was deemed ineligible for SBIR grant funds, Congressman Baird set to work on getting the rule changed. Venture capital-backed small businesses conduct an array of innovative, life-saving research and development programs, and many of these innovative small businesses could not support their costly research without some venture capital funding. Congressman Baird believes the 2001 SBIR ruling conflicts with the original intent of the law; SBIR was established in 1982 to encourage small businesses to explore their technological and commercial potential, and to enable them to compete with larger businesses.

Additionally, Congressman Baird has been working with his colleagues on the Science Committee to improve the SBIR program and address some of the barriers that prevent small businesses from commercializing the technologies that they develop under it. SBIR is the single largest technology development program supported by the federal government, but has received little congressional oversight since its creation. Congressman Baird supports common sense SBIR reforms that ensure federal research and development investments ultimately stimulate job creation and economic growth.

Tsunami Detection

In December of 2004, a deadly tsunami ravaged Southeast Asia. Congressman Baird believes the U.S. can and must learn from this tragedy. The devastation in Asia has made it alarmingly clear that our federal, state, and local governments must work together to ensure that Washington has a fully functioning tsunami detection and alert system. Funding the programs that will protect our coastal communities is not a choice, it is a requirement. Congressman Baird strongly supports the Administration's decision to allocate further funding for tsunami detection programs, and has worked, and will continue to work, to make sure that communities along the Long Beach Peninsula, the Columbia River, and Washington's entire coast are adequately protected.

Cyber Security

The U.S. economy relies on a vast information infrastructure. Unfortunately, this infrastructure is every bit as vulnerable as our physical infrastructure is to terrorist attack. Imagine, for instance, if the September 11th terrorists had simultaneously launched a cyber attack, throwing our financial markets in chaos, disabling our air traffic control system, and undermining critical communications networks. Such attacks are indeed possible and very probable unless Congress provides the resources to reinforce our IT infrastructure. Congressman Baird introduced legislation to establish a formidable research effort, using the brightest minds in the academic community, to bolster the integrity of our computer network infrastructure. He reached across party lines with Science Committee Chairman Boehlert to pass the Cyber Security Research and Development Act, which ultimately

became law.

Invasive Species

Invasive species may not receive much attention in national political debates, but they represent one of the most profound threats to our local environment and economy. In Southwest Washington, for instance, Spartina grass has invaded Willapa Bay, creating an ecological dead-zone, and threatening the very existence of our local shellfish industry. In addition to securing appropriations to fight Spartina, Congressman Baird helped create three separate bills to provide additional resources to identify and combat invasive species: the National Aquatic Invasive Species Act, the Aquatic Invasive Species Research Act, and the Harmful Algal
Bloom and Hypoxia Research Amendments Act. Congressman Baird is also leading efforts to prevent the introduction of Zebra Mussels into our West Coast ecosystems. These freshwater mussels have proliferated in the Great Lakes and Mississippi river region, causing billions of dollars in economic and environmental damage.

Nobel Prize

In April of 2006, the House of Representatives unanimously passed a resolution authored by Congressman Baird to honor the 2005 Nobel Laureates in the fields of Physics and Chemistry as well as acknowledge the importance of National Institute of Standards and Technology (NIST) research and its contributions to United States industry, academia, and government. Congressman Baird hopes that the passage of this resolution, along with other similar resolutions, will inspire a new generation of students eager to pursue careers in math and science.

Earthquakes

On February 28, 2001, Washington state was struck by a 6.8 magnitude earthquake, the epicenter of which was located only a few miles from Olympia. A federal program, known as the National Earthquake Hazards Reduction Program (NEHRP), helped mitigate the quake's impact on local communities. The NEHRP program provides builders and engineers with assistance to design and construct structures that can withstand powerful earthquakes.

The NEHRP program remains tremendously important to our region because Washington will inevitably experience more earthquakes in the future. When Congress reorganized the federal government to create a Department of Homeland Security, it inadvertently included NEHRP in the new department. NEHRP was not intended as a homeland security program, and its inclusion in DHS added an additional layer of bureaucracy, without providing any additional benefit. To remedy this, Congressman Baird introduced bipartisan legislation to return NEHRP to the Department of Commerce, streamlining the program and ensuring our communities remain protected. Congressman Baird's legislation passed the House on October 1, 2003.

Nanotechnology

Nanotechnology is a developing science that has the potential to revolutionize our world. Nanotech scientists study tiny units, such as single cells and molecules. Nanotech scientists and engineers are currently working to identify diseases at their earliest stages, utilizing only a small tissue sample, such as a piece of hair or even a single cell. These tests could be applied to livestock, and diseases such as Mad Cow could be identified within seconds, whereas the current test is cumbersome, expensive, and time-consuming. These measurements could be analyzed by ultra-rapid diagnostic tools that respond in real time.

Congressman Baird has secured funds to allow significant nanotech research to occur in Washington state. This research may ultimately transform our world, while simultaneously creating a new high-tech manufacturing sector for nanotech devices in our own state.

Small Businesses and Technological Innovation

Our economy is dependent on innovation for continued growth, and research indicates that small businesses tend to be more dynamic and inventive than large corporations. Currently, the government operates a program called the Small Business Innovative Research (SBIR) program to encourage small businesses to develop innovative technologies for federal use as well as to encourage commercialization for individual companies.

Unfortunately, the program has become out of reach for many companies with venture capital investment. These companies are foten cot cleared under the definition of "small business," even though they may only have a handful of direct employees. Congressman Baird is a cosponsor of legislation to allow some companies with venture capital investment from accessing the SBIR program. He is also working on legislation to reform the program and address some of the barriers that prevent small businesses from commercializing the technologies that they develop under the program.